

### **REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1-37 have been canceled without prejudice or disclaimer, and new Claims 38-85 have been added. No new matter has been added. Accordingly, upon entry of this Amendment and Reply, Claims 38-85 will be pending in the present application.

The claims of the present application have been rewritten to address a number of typographical and other issues within the claims and to more clearly convey the claimed subject matter. For example, the independent claims now specify the fact that the “hydrogen storage material” and the “high energy density metal” are provided in separate sheets, which provides further definition to the positioning of such materials within the electrode.

### **Claim Objections**

On page 2 of the Office Action, Claim 5 was objected to based on the misspelling of the word “zirkonium.” Claim 5 has been canceled, rendering this objection moot. Where “zirconium” has been recited in the new claims presented herein, the correct U.S. spelling “zirconium” has been used.

### **Claim Rejections – 35 U.S.C. § 101 and 112**

On page 2 of the Office Action, Claims 1-23 and 28-37 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. On page 3 of the Office Action, Claims 22-23 and 32-37 were further rejected under 35 U.S.C. § 101.

Claims 1-23 and 28-37 have been canceled, rendering these rejections moot. The new claims submitted herewith are believed to comply with the requirements of 35 U.S.C. §§ 101 and 112.

**Claim Rejections – 35 U.S.C. §§ 102 and 103**

Various claims of the present application were previously rejected under 35 U.S.C. § 102 or § 103. Specifically:

- On page 4 of the Office Action, Claims 1-9, 14, 19-20, 22-28, 30-31, and 33-37 were rejected under 35 U.S.C. § 102(b) as being anticipated by Bando et al. (U.S. Patent No. 5,965,295).
- On page 9 of the Office Action, Claims 10-13 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bando et al. in view of Young et al. (U.S. Patent No. 6,461,766).
- On page 11 of the Office Action, Claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bando et al. in view of Ouchi et al. (U.S. Patent No. 6,258,482).
- On page 12 of the Office Action, Claims 17, 18, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bando et al. in view of Young et al. and Ouchi et al.
- On page 16 of the Office Action, Claims 29 and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bando et al. in view of Ovshinski et al. (U.S. Patent No. 6,620,539).

As described above, Claims 1-37 have been canceled without prejudice or disclaimer, rendering the above rejections moot. To the extent that the Examiner believes that similar rejections apply to the newly-presented Claims 38-85, Applicant respectfully traverses such rejection.

New independent Claim 38 recites a “first sheet comprising a hydrogen storage material” and a “second sheet separate from the first sheet, the second sheet comprising a high energy density metal that is configured to act as a hydrogen source for the hydrogen storage material on reaction with electrolyte in the cell.”

New independent Claim 61 recites similar elements, reciting a “first sheet including a hydrogen storage material” and a “second sheet separate from the first sheet, the second sheet

including a high energy density metal that is configured to act as a hydrogen source for the hydrogen storage material on reaction with electrolyte in the cell.”

New independent Claim 82 recites “sintering or forming with a binder a high energy density metal into a first sheet” and “forming a second sheet comprising a hydrogen storage alloy.”

Bando et al., alone or in combination with Young et al., Ouchi et al., and/or Ovshinski et al., does not disclose, teach, or suggest the combinations of elements recited in independent Claims 38, 61, and 82.

For example, the Examiner admitted on page 12 of the Office Action that Bando et al. “does not disclose the high energy density [metal] and the hydrogen storage material are in two separate sheets.” The Examiner then relied on Ouchi et al. to provide such a teaching.

Applicant respectfully disagrees that Ouchi et al. discloses, teaches, or suggests providing a high energy density metal and a hydrogen storage material in two separate “sheets” or “layers,” as that term is used in the present application. Paragraph [0061] of the present application, for example, describes that “layers are prepared in thin sheets and pressed together.” Thus, a person of ordinary skill in the art reviewing the present disclosure would readily understand and appreciate what is meant by the terms “sheets” and “layers.”

In contrast to the two separate “sheets” of material recited in Claims 38, 61, and 82, Ouchi et al. discloses a “hydrogen storage alloy powder which characteristically includes agglomerages of hydrogen storage alloy particles joined together through a metallic layer” (col. 1, line 67 to col. 2, line 2). Ouchi et al. goes on to describe that the “metallic layer covers surface portions of the hydrogen storage alloy particles to reduce exposed surface areas thereof which will be subjected to oxidation” (col. 2, lines 6-9; underlining added for emphasis).

In other words, Ouchi et al. does not disclose that the “metallic layer” is a separate “sheet” of material as that term is used in the present application, but rather that it is a coating

applied to individual particles of the “hydrogen storage alloy powder.” Because the metallic layer “joins together” the hydrogen storage alloy particles, the metal is acting as a “matrix” in which the hydrogen storage alloy particles are provided. For example, Ouchi et al. notes that the “metallic layer can be produced in the form of a deposit of any of the listed metals on surfaces of the hydrogen storage alloy particles, for example, by immersing the alloy particles in an acid solution into which a metallic compound is dissolved . . . .” In fact, Claim 1 of Ouchi et al. recites “agglomerates of hydrogen storage alloy particles joined together through a metallic layer which covers outer surface portions of said hydrogen storage alloy particles.”

Accordingly, Ouchi et al. does not disclose, teach, or suggest the use of two separate sheets where one of the sheets includes a “hydrogen storage material” and the other includes a “high energy density metal that is configured to act as a hydrogen source for the hydrogen storage material on reaction with electrolyte in the cell.” The remaining references (Young et al. and Ovshinski et al.) do not cure this deficiency.

Accordingly, Applicant submits that the combinations of elements recited in independent Claims 38, 61, and 82 are not disclosed, taught, or suggested by the cited references. Consideration and allowance of all pending claims is therefore respectfully requested.

Applicant further notes that the dependent claims, although patentable by virtue of their dependence on allowable independent claims, also recite further elements that should be considered by the Examiner when assessing the patentability of the claims.

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It is submitted that each outstanding objection and rejection to the Application has been overcome, and that the Application is in a condition for allowance. The Applicants request consideration and allowance of all pending claims.

It should also be noted that although arguments have been presented with respect to certain claims herein, the recited subject matter as well as various other subject matter and/or

combinations of subject matter may be patentable for other reasons. Further, the failure to address any statement by the Examiner herein should not be interpreted as acquiescence or agreement with such statement. The Applicants expressly reserve the right to set forth additional and/or alternative reasons for patentability and/or allowance with the present Application or in any other future proceeding, and to rebut any statement presented by the Examiner in this or other papers during prosecution of the present application.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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